

COVID-19 Guidance for Maternity Services

Statewide Maternity and Neonatal Clinical Network

Background

The COVID-19 is caused by novel strain of coronavirus (SARS-CoV-2) affecting humans. Some coronaviruses can cause illness similar to the common cold and others can cause more serious diseases such as Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). Understanding of the behaviour of COVID-19 is still developing.

Screening and containment measures have been successful in slowing the spread of the virus, and provided a small window of time for preparation of our response.

Early modelling suggests that up to 60% of the population could be impacted with the majority of cases (possibly >80%) mild. However, this still means potentially very large numbers of severe and critical cases based on these projections. The first wave of illness at scale is projected to come 10 weeks after person to person transmission in the community begins. For Queensland, this period will likely overlap with winter planning and flu season and is currently predicted to last 10-20 weeks. COVID-19 is moderately severe in the general population but highly transmissible.

Immunosuppression of pregnancy may impact severity of symptoms caused by respiratory viruses. High fevers during the first trimester of pregnancy can increase the risk of certain birth defects. There is no evidence available about early pregnancy outcomes and limited evidence in women with COVID-19 during late pregnancy to provide definitive guidance.

Current evidence is based on limited case studies and should be interpreted with caution, however:

- There is no evidence demonstrating *in-utero* (vertical) transmission. Very few cases of vertical transmission of COVID-19 are anticipated^{1,2}
- There is no evidence demonstrating transmission by breastfeeding.^{1,2} Antibodies to coronaviruses have been identified in breastmilk.

Considerations and principles are based on the limited evidence available about transmission of the virus that causes COVID-19, and knowledge of other viruses that cause severe respiratory illness including influenza, severe acute respiratory syndrome coronavirus (SARS-CoV), and Middle East Respiratory Syndrome coronavirus (MERS-CoV). The approaches outlined below are intentionally cautious until additional data become available to refine recommendations for prevention of person-to-person transmission in inpatient maternity care settings.¹

Containment can significantly reduce the peak impact.

- In the general population identifying infected patients and isolating them within 48 hours of the onset of even mild symptoms is recommended.
- Even containing at a 10-50% rate will be significantly helpful in delaying the onset and reducing the peak impact.
- This makes testing and quarantine for mild illness worthwhile, which has impacts on need for unplanned assessment and testing.

The delivery of the response will be by the individual HHS Disaster or Pandemic responses, with support and co-ordination from the central Queensland Health Agencies.

This document provides:

1. A framework for considering impact for maternity services
2. Principles to help individual HHSs and their maternity services develop their own response plans
3. Outlines the role of the Statewide Maternity and Neonatal Clinical Network in the response

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Version Control

Version	Notes	Date	Update by
V1	First publication. Endorsement by SMNCN Steering Committee.	11 March 2020	Statewide Maternity and Neonatal Clinical Network

Development

Interim guidance was developed with consideration of best available evidence. Structured literature search was conducted by Queensland Clinical Guidelines.

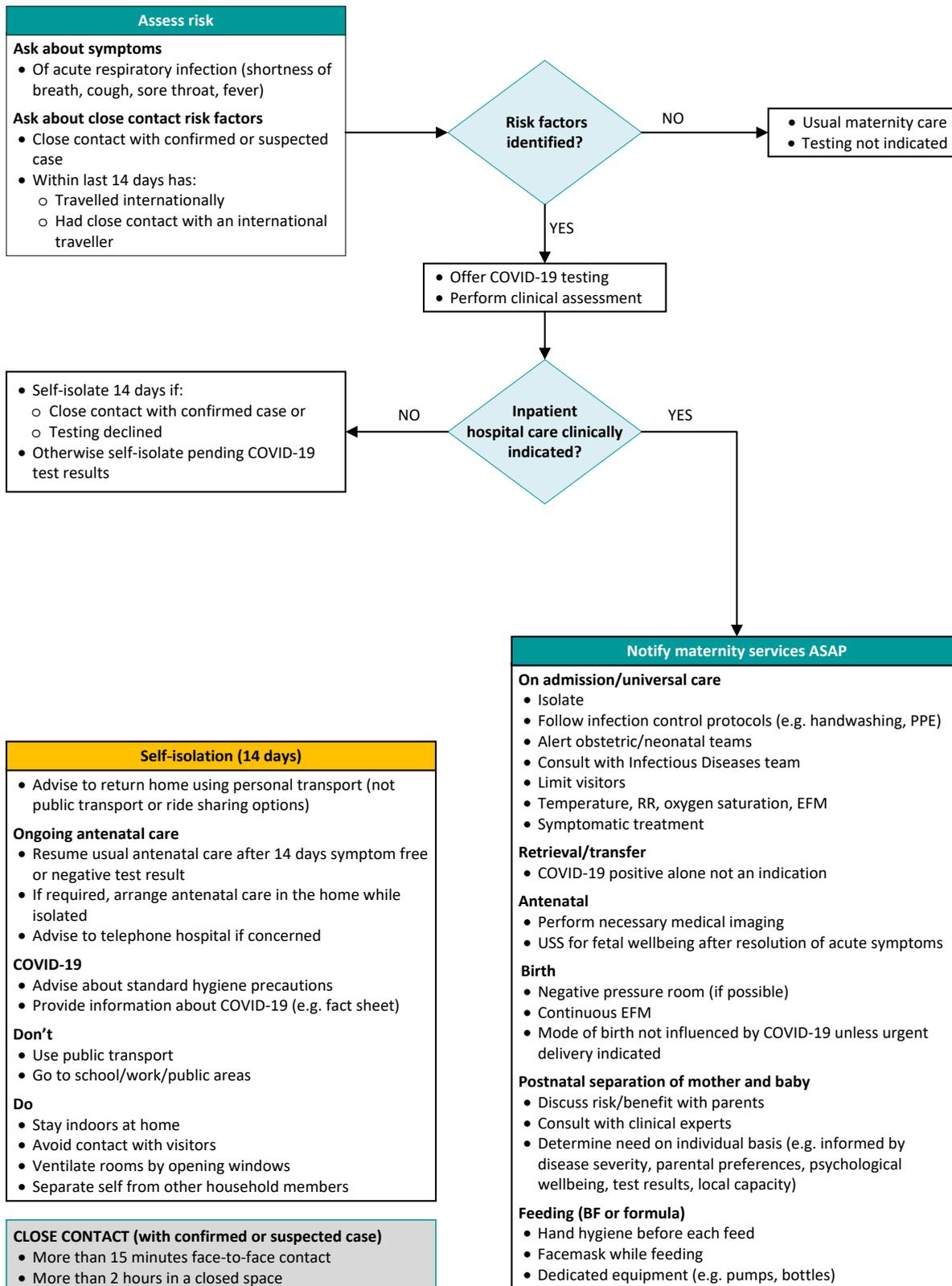
Structured literature search last conducted: 6 March, 2020

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- Queensland Clinical Guidelines
- Office of the Chief Nursing and Midwifery Officer
- Retrieval Services Queensland
- Neonatal Retrieval Emergency Service Southern Queensland (NeoRESQ)
- Obstetric Retrieval Emergency Service Southern Queensland (ObsRESQ)

Pregnant Woman With Suspected Covid-19: Triage And Risk Assessment

Screen before arrival where possible (e.g. by phone)
Triage in location separate from general public
Recommend/provide surgical face mask at face-to face assessment



ASAP: as soon as possible, **BF:** breastfeeding, **EFM:** electronic fetal monitoring, **PPE:** personal protective equipment, **RR:** respiratory rate, **USS:** ultrasound scan

Framework for considering impact for maternity services

Consider the impact on Maternity and Newborn Services using the following framework.

- Need for high volume screening on entry to Hospitals—including entry direct (Not via Emergency Department) to Births Suites, and Pregnancy Assessment Units/Obstetric Review Centres
- Management of large numbers of women and babies with significant respiratory illness
- Impact on normal function
 - a. Access to antenatal, intrapartum and postnatal care for those with and without COVID-19
 - b. Access to neonatal care
- Supplies, equipment and consumables
 - a. Increased demand due to increased presentations
 - b. Supply chain problems due to the global impact of the situation
- Staffing
 - a. Significant numbers of staff may be unavailable due to infection and social reasons
 - b. Increased demand for staff with specialist skills

Principles for maternity services response

These principles are to assist Hospital and Health Services to plan their local response with consideration of local service context, surge demand for hospital and HHS services, and surge risk of infection and symptoms among the maternity population and workforce.

Maternity and neonatal care considerations

1. Before presentation for maternity care

- Consider methods to identify suspected or confirmed COVID-19 before arrival at the hospital, which may include:
 - Open ended questions by midwifery staff when women phone birthing services. For example:
 - “Are you feeling unwell or do you have flu like symptoms?”
 - “Have you returned from overseas in the last 14 days?”
 - “Have you been in close contact with people who have returned from overseas in the last 14 days? “
- If a woman is suspected or confirmed COVID-19, notify the maternity service prior to arrival to allow consideration of infection control and service planning, for example: identifying the most appropriate room for labour and birth, ensuring infection prevention and control supplies and PPE are available, informing workforce involved in care.

2. Triage and risk screening for COVID-19

- Triage and risk screen pregnant women presenting for pregnancy related concerns in a separate location to general public entering emergency or outpatient clinics.
- Establish triage and risk screening capability for maternity patients before entry to inpatient and outpatient areas including Birth Suites, and Pregnancy Assessment Units/Obstetric Review Centre's.
- Use open ended screening questions for antenatal clinic phone enquiries, birth suite enquiries and postnatal home visiting initial phone contacts
- Consider the need for screening and isolation with respect to urgency of required care.

3. Pregnant women advised to self-isolate

Pregnant women who have been advised to self-isolate should stay indoors and avoid contact with others for 14 days. It is recommended:

- Not to go to school, work, or public areas
- Not to use public transport
- Stay at home and avoid visitors
- Ventilate rooms by opening windows
- Separate themselves from other members of the household

4. For women presenting for maternity care

- If suspected or confirmed COVID-19:
 - Utilise isolation and transmission precautions
 - Where available, utilise negative pressure birthing room for confirmed COVID-19
 - Electronic fetal monitoring is recommended (continuous during labour)
 - Maternal observations should include temperature, respiratory rate and oxygen saturations
 - Mode of birth should not be influenced by COVID-19 unless the women's respiratory condition demands urgent delivery
 - For category one caesarean section, donning PPE is important even though time consuming.
 - Perform necessary radiographic investigations. Make reasonable efforts to protect the fetus from radioactive exposure.
 - Inform neonatal team of birth plans as early as possible
 - Ultrasound fetal growth surveillance 14 days following resolution of acute illness
- If COVID-19 not suspected
 - Utilise usual care pathways
 - Avoid exposure to other known or potentially infected patients

5. Retrievals and Inter-Hospital Transfer – Obstetric and Neonatal

- All Inter-hospital transfers need consultant to consultant assessment and decision based on consideration of all factors and importantly urgency relative to capacity
- Coordinate retrievals via RSQ. Contact RSQ via usual process
- Use usual criteria for transfer/retrieval – ie. Based on clinical condition
- Coronavirus infection is not an indication for transfer/retrieval in the absence of other indications

6. Mother and baby contact if mother suspected or confirmed COVID-19

It is unknown whether newborns with COVID-19 are at increased risk for severe complications. To reduce the risk of transmission of the virus that causes COVID-19 from the mother to the newborn, consider whether there is need to separate (separate room) the mother and baby.

- Consider the individual situation in assessing whether there is need for temporary separation:
 - Discuss risks and benefits of temporary separation with the mother / family including the risk of the mother holding the baby in close proximity
 - Precautionary separation of a mother and a healthy baby should not be undertaken lightly given the potential detrimental effects on feeding and bonding.
 - Clinical condition of mother and baby - disease severity, illness signs and symptoms, other conditions
 - Psychological wellbeing
 - Involve multidisciplinary team including consultant obstetrician, consultant anaesthetist, midwife in charge, and consultant neonatologist/paediatrician, and neonatal/paediatric nurse in charge
 - laboratory testing results for SARS-CoV-2
 - local capacity requirements
- Establish timing and frequency for reassessing mother's and baby's wellbeing
 - Identify multidisciplinary team responsible for review including Obstetrician, Midwife and Neonatologist/Paediatrician
- If collocating mother and baby:
 - Provide PPE (facemask) and hand hygiene information to the mother including washing hands before touching baby and body where baby may make skin to skin contact
 - Support breastfeeding according to mothers intention – use transmission precautions while breastfeeding (Facemask and Hand hygiene)
 - Consider maintaining general isolation distance of 1.5m where possible
- If temporarily separating mother and baby:
 - Consider and support the mother's intention to breastfeed:
 - If temporarily separated, encourage to express their breast milk to establish and maintain milk supply. If possible, a dedicated breast pump should be provided. Prior to expressing breast milk, mothers should practice hand hygiene. After each pumping session, all parts that come into contact with breast milk should be thoroughly washed and the entire pump should be appropriately disinfected per the manufacturer's instructions. This expressed breast milk should be fed to the newborn by a healthy caregiver.
 - Limit visitors, with the exception of a healthy parent or caregiver
 - Instruct visitors and care givers on wearing appropriate PPE and hygiene precautions.
 - Decision to discontinue temporary separation should be made with individual consideration of the woman's and baby's wellbeing, disease severity, illness signs and symptoms, laboratory testing results for SARS-CoV-2 and local capacity requirements.
 - If mother is unable to care for baby due to illness, consider sending baby home for home isolation

7. Breastfeeding if suspected or confirmed COVID-19

- Support mother's intention to breastfeed
- If collocated and the mother wishes to breastfeed support the mother to:
 - Practice hand hygiene before each feed

- Wear a facemask while feeding
- If temporarily separated, encourage to express their breast milk to establish and maintain milk supply. If possible, a dedicated breast pump should be provided. Prior to expressing breast milk, mothers should practice hand hygiene.¹ After each pumping session, all parts that come into contact with breast milk should be thoroughly washed and the entire pump should be appropriately disinfected per the manufacturer's instructions. This expressed breast milk should be fed to the newborn by a healthy caregiver.

8. Hand Hygiene

Hand hygiene includes use of alcohol-based hand sanitizer that contains 60% to 95% alcohol before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE, including gloves. Hand hygiene can also be performed by washing with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water before returning to alcohol-based hand sanitiser.

Facility and workforce

9. General response

- Utilise specialist capacity for greatest benefit to the greatest number of women
- Coordinate with hospital response, particularly neonatal special care and neonatal intensive care response
- Collaborate with Infectious Diseases specialists regarding isolation
- Early consultation with Intensive care specialists for assessment of need for high dependency care
- Commence hospital avoidance for antenatal care for low risk pregnant women
- Promote vaccination and healthy lifestyle measures for staff and pregnant women to minimise avoidable impacts

10. Maternity Services and peri-operative women's theatres capacity management

- Antenatal care:
 - Reduce Hospital/acute care facility based outpatient services for low risk women pro-actively in anticipation of medical and midwifery services focussed on high risk outpatient and inpatients
 - Establish pathways to redirect low risk to community based antenatal care e.g. General Practitioner and community midwifery, including increasing Midwifery Group Practice (MGP) to maximise continuity and community based care.
- High risk obstetric services: continue services and focus (potentially limited) workforce on provision of high risk services
- Birthing services: continue services, including maximising credentialing processes for privately practising midwives and General Practitioner-Obstetrics (GPOs)
- Postnatal services: continue inpatient services as clinically necessary. Redirect postnatal care to community based midwifery postnatal care where possible (e.g. home visits)
- Obstetric Theatres: Consider relative to surge demand
 - Maintain emergency Obstetrics capacity. Consider impact of theatre Infection Control Procedures on theatre availability and account for when operating on confirmed or suspected COVID-19 infected patients.
 - Reduce elective gynaecological services where possible to support additional peri-operative capacity accounting for additional theatre turn around times for Infection Control procedures for women's theatres
- Elective Gynaecology:
 - As surge demand increases, reduce services to support perio-operative capacity—consider redirection to private care or postpone service.

11. Isolation capacity

- Establish isolation capacity for women and their baby clinically requiring admission or hospital based care
- Home isolation is recommended where inpatient admission is not clinically necessary
- Inpatient and outpatient hospital based care will need isolation capacity for all areas in maternity including antenatal, pregnancy assessment, birthing, peri-operative, postnatal, and neonatal units
- Consider isolation capacity relative to size of unit, CSCF level and surge demand for isolation
- Utilise designated single/multiple bay rooms for isolation
- Provide full PPE equipment for ALL staff to use

12. Negative pressure birth rooms

- Services with Maternity Clinical Services Capability Framework (CSCF) level 4, 5 and 6, establish at least one negative pressure room for labouring mothers with confirmed COVID-19.

13. Neonatal nursery

- Establish/Identify capacity to facilitate temporary separation of mother and baby if required. Consider relative to surge demand and individual case:
 - home isolation under care of capable relative
 - isolation within neonatal nursery
 - establishing a well baby nursery

14. Visitors to Maternity and Neonatal areas

- Follow infection control processes for managing visitor access, including essential support persons for women in labour (e.g., spouse, partner) and provide PPE as appropriate for protection of women and babies and visitors

15. Equipment procurement strategies

2. Coordinate high dependency care resources with Intensive Care Units and Emergency Departments e.g. High flow oxygen

16. Staffing and Workforce

Consider relative to surge demand and exposure risk:

- Deploy pregnant staff to services with low risk of exposure
- Reserve obstetrician workforce for high risk and inpatients. Note obstetrician workforce could be affected severely due to clinical or personal social needs
- Consider capacity of public provided community based service with respect to redirecting low risk antenatal care to community sites and / or community based service providers
- Additional skilled staff will be difficult to recruit, and a significant absenteeism rate can be expected.
 - Any possible additional recruiting should commence now
- Consider redeploying staff whose usual roles (e.g. elective surgery and some outpatients) are suspended or reduced as part of the response, to non-specialist settings
- Consider redeploying non-front line clinician roles (e.g. educators, patient safety, project officers) to support clinically
- Commence Upskilling of existing staff who may be required to be redeployed to meet surge demand
- Alternative staffing models including the use of less skilled maternity staff (e.g. early career / midwifery graduates) and reduced numbers of medical and nursing staff should be developed
 - For clinical staff not currently providing frontline services, consider re-introduction to frontline services and clinical skills training as required
- PPE training
 - Should begin now, be standardised and systematic across all staff roles
 - Staff will move between hospital locations, so should be the same across the whole HHS
- The use of staff who are confined to home due to quarantine or social reasons should be explored

17. Location and resourcing of fever clinics

- Women who are potentially contagious, but do not need hospital care should be subject to hospital and ED avoidance. Large scale fever clinics should avoid bringing people (including pregnant women) into hospitals by being located offsite and exploring virtual care delivery models
- Triage and risk screen pregnant women presenting for pregnancy related concerns in a separate location to general public entering emergency or outpatient clinics.
- Establish triage and risk screening capability for before entry to maternity services (e.g Birth Suites, Pregnancy Assessment Units/Obstetric Review Centre's).
- initial function will be about testing and quarantining low acuity presentations
- later function may shift to a focus on severity assessment and management of moderate illness - which will require additional resources (e.g.) ability to CXR
- up to 20% of general patients will later develop severe illness. How this translates to the maternity population is unknown. How these women access the maternity system for review and management needs to be considered with the local obstetric team
- Initial functions do not require specialised obstetric and midwifery care. Staffing can (and should) be provided by others.

Role of Statewide Maternity and Neonatal Clinical Network

- Advising Queensland Health on Maternity and Neonatal related strategy in the COVID-19 response
- Assisting SHECC on request
- Communicate Maternity and Neonatal specific issues to Queensland Health and Network Members

References

1. Centre for Disease Control, 2020, Interim Considerations for Infection Prevention and Control of Coronavirus Disease 2019 (COVID-19) in Inpatient Obstetric Healthcare Settings [cited 6 March 2020] Available online: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html>
2. Royal College of Obstetricians and Gynaecologists, 2020, Coronavirus (COVID-19) Infection in Pregnancy, Version 1, [cited 10 March 2019] Available online: <https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/>